

# Crane Tech Tips - a periodic newsletter

**F**or many years, there were only two positions where mobile crane outriggers could be used for applications of crane ratings. These were:

1. All outriggers fully deployed and set
2. Outriggers not deployed or set.

Modern cranes have changed dramatically, and one of the most significant changes is multiple outrigger configurations.

To make sure we are on the same path: never has any crane manufacturer approved "on outrigger" ratings when all outriggers were not equally deployed and set to specification. No manufacturer



## AVOID OUTRIGGER FAILURE

ever allowed only one, two, or three of four outriggers set at any location to determine a crane's safe rating.

It was not uncommon, however, for an operator working in tight quarters to position outriggers at different locations and to refer all lift capacities to the more conservative On-Rubber load chart. Seemingly the safe approach to ensuring that any loss of stability would be prevented by the outriggers being set, regardless of their actual configuration. After all, the ratings being used were conservative for on-rubber lifts only, right?

Wrong!

Most of today's modern hydraulic cranes have multiple outrigger positioning. This means the outriggers have more than just the fully out and down positioning. Many crane's outriggers may now be set to 0%-extension and down, 50%-extension and down, or 100%-extension and down, and each position has its own load chart and ratings.

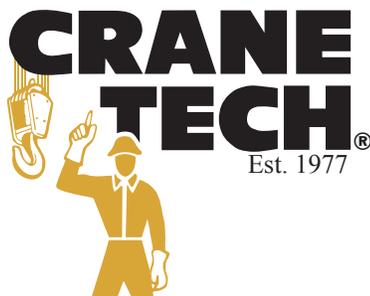
What is at issue is the location where outriggers may be positioned and the reinforcing plates, sometimes called "doubblers," on the outrigger beams and inside the outrigger box.

When a manufacture incorporates reinforcement at intermediate outrigger positions, the outriggers are only to be used when set equally "at those reinforced positions." Even when using the on-rubber ratings, outriggers not set at the designated locations can, and do, result in structural failure of the outrigger box and possibly the beam itself.

Make sure your crane operators are aware of this structural limitation. Set up correctly for maximum safety.

Contact your crane supplier for clarification of outrigger positioning.

*Your crane may vary from this example so be sure to check your crane operator's manual carefully.*



**Safety through  
Education**

Greater Tampa Area

6037 Winthrop Commerce Ave.  
Riverview, FL 33578

Phone: 813-248-4800  
800-521-7669

Web: [www.cranetech.com](http://www.cranetech.com)

© 2011 Crane Tech, LLC. (012511)

### Crane Tech and the Smithsonian Institute

Crane Tech was selected by the Smithsonian Institute to provide rigging training for those tasked with moving art work and artifacts. The Smithsonian's Support Center regularly handles objects of considerable size with diverse configurations. The item shown below is extremely unique – the largest bone known to mankind. Part of a mandible (jawbone) from a blue whale, the bone weighed in at over 1,100 lbs. and more than 19 feet in length. Pictured to the right is a blue whale skull next to a warehouse door, to give an idea of the scale of the animal. Pictured below, Crane Tech instructor Jeff Ellis (black shirt), assists Smithsonian personnel in calculating the weight and center of gravity of the bone and careful rigging of the bone for movement.

